

WAUKESHA COUNTY LAND INFORMATION PLAN

2016 - 2018

Approved by the Waukesha County Land Information Council 04/21/2016

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Executive Summary

About this Document. This document is a land information plan for Waukesha County prepared by the land information officer (LIO) and the land information council. By Wisconsin statute, “a countywide plan for land records modernization” is required for participation in the Wisconsin Land Information Program (WLIP). The purpose of this document is twofold: 1) to meet WLIP funding eligibility requirements necessary for receiving grants and retaining fees for land information, and 2) to identify the components of the County Land Information System and discuss how these components can be used to increase government efficiencies and benefit the general public.

WLIP Background. The WLIP, administered by the Wisconsin Department of Administration, is funded by document recording fees collected by register of deeds at the county-level. The program provides over \$9 million annually to Wisconsin counties for the modernization of local land records. In 2014, Waukesha County received a \$1,000 WLIP grant and retained a total of \$452,000 in local Register of Deeds document recording fees for land information. Beginning in 2016, WLIP Strategic Initiative grants are projected to increase the county land information budget by \$50,000 per year.

This plan lays out how funds from grants and retained fees will be prioritized. Actual expenditure amounts will be determined annually in the county budget process with the approval of the County Board.

Land Information in Waukesha County. Land information is central to county operations, as many essential services rely on accurate and up-to-date geospatial data and land records. A countywide land information system supports economic development, emergency planning and response, code enforcement, and a host of other citizen services. The Waukesha County land information system integrates and enables efficient access to information that describes the physical characteristics of land, property, facilities and infrastructure.

Mission of the Land Information Office. The main strategic objective of the Waukesha County Department of Parks and Land Use - Land Information Division (Land Information Division) under this Plan is to provide cost effective services that are delivered with competence and skill. We believe this objective will be met by moving forward in four primary areas:

1) Core dataset management

One of the initial achievements of the WLIP was the identification of core datasets, or “Foundational Elements,” that were included in the County Land Information Program. Waukesha County has created each of the core datasets that were identified and the following sections of this plan provide related information. As such, the highest priority for the County Land Information Program resources is the ongoing maintenance of each core dataset.

2) Internet Mapping System

Waukesha County has had a public facing Land Information webmapping site since 2000. The County is currently moving to a cloud based platform for all system computer processing. Over the next 3 years, this platform will allow new special purpose applications to be developed and facilitate additional mobile functionality.

3) Convert to new vertical and horizontal control datums.

The horizontal survey control system for Waukesha County is currently based on a survey accuracy of Third Order, Class I, referencing the North American Datum of 1927, Wisconsin State Plane coordinate System, South Zone. At the same time, the vertical survey control system for Waukesha County is based on vertical survey control accuracy of Second Order, Class II, referencing the National Geodetic Vertical Datum of 1929. During the next 3 years, Waukesha County will update the County survey control system to newer datums to facilitate

easier data exchange with Federal and State agencies and to accommodate newer GPS survey technologies.

4) Data Integration.

During the next three years, the Waukesha County land information program will improve that ability to share and exchange data among and between other governmental units and those members of the general public that can make use of the information, especially in the area of economic development.

Future activities will be focused on maintenance of existing foundational element datasets, enhanced data distribution, and a major project to update the horizontal and vertical datums which were used in the development of all current datasets.

1. INTRODUCTION

In 1989, a public funding mechanism was created whereby a portion of County Register of Deeds document recording fees collected from real estate transactions would be devoted to land information through a new program called the Wisconsin Land Information Program (WLIP). The purpose of the land information plan is to meet WLIP requirements, and aid in county planning for land records modernization.

The WLIP and the Land Information Plan Requirement

In order to participate in the WLIP, counties must meet certain requirements:

- Update the county's land information plan at least every three years
- Meet with the county land information council to review expenditures, policies, and priorities of the land information office at least once per year
- Report on expenditure activities each year
- Submit detailed applications for WLIP grants
- Complete the annual WLIP survey
- Subscribe to DOA's land information listserv
- Meet a June 30, 2017 deadline to post certain types of parcel information online

Any grants received and fees retained for land information through the WLIP must be spent consistent with the county land information plan.

Act 20 and the Statewide Parcel Map Initiative

A major development for the WLIP occurred in 2013 through the state budget bill, Act 20. It directed the Wisconsin Department of Administration (DOA) to create a statewide digital parcel map in coordination with counties.

Act 20 also provided more revenue for WLIP grants, specifically for the improvement of local parcel datasets. The WLIP is dedicated to helping counties meet the goals of Act 20 and has proposed that funding be made available to counties in the form of Strategic Initiative grants to be prioritized for the purposes of parcel dataset improvement. For Strategic Initiative grant eligibility, counties will be required to apply WLIP funding toward achieving certain statewide objectives, specified in the form of "benchmarks." Benchmarks for parcel data—standards or achievement levels on data quality or completeness—are determined through a participatory planning process and will be detailed in future WLIP grant applications.

County land information plans were initially updated every five years. However, as a result of Act 20, counties must update and submit their plans to DOA for approval every three years. Thus, the minimum planning horizon for these plans is three years.

County Land Information System History and Context

Waukesha County has had a long and successful history with land records modernization. Waukesha County initiated a Public Land Survey System (PLSS) remonumentation program in 1981 under the direction of the Southeastern Wisconsin Regional Planning Commission, which not only reestablished the survey control system, but created new base maps. In 2000, Waukesha County launched the first public facing land records webmapping site. In 2004, the first phase II e-911 call was successfully responded to when a call came into the combined dispatch center from a person who did not know her location, but the caller location was able to be geolocated with a dot appearing on the dispatcher's console map. By 2006, it was determined that Waukesha County had completed all the foundational elements as identified by the WLIP. Since that time, the County land program has worked to maintain and distribute the data currently identified as program components.

The WLIP identified a set of Foundational Elements that were to serve as the basis for a complete County Land Information System. The primary custodian of the for the WLIP defined Foundational Elements in Waukesha County is the Land Information System Division (LIS) housed within the Department of Parks and Land Use. The LIS Division has been designated as the Land Information Office, with the Division Manager assigned the duties of County Land Information Officer.

Plan Participants and Contact Information

Another requirement for participation in the WLIP is that each county will establish a county land information council. The Waukesha County Land Information Council was established in 2011 by Ordinance by the County Board. The Council is tasked with reviewing the priorities, needs, policies, and expenditures of a land information office and advising the County on matters affecting that office. The following table identifies the members of the Waukesha County Land Information Council:

WAUKESHA COUNTY LAND INFORMATION COUNCIL

Name	Title	Council membership per s. 59.72(3m), Wis. Stats and Waukesha County Enrolled Ordinance 166-25
Eric Highum	Member of County Board	Yes
Don Dittmar, LIO	Land Information Officer	Yes
Laura Kruschka	Realtor Association representative	Yes
Gary Bell	Director of the Department of Emergency Preparedness	Yes
Kurt W. Bauer	Appointed County Surveyor	Yes
James Behrend	Register of Deeds	Yes
Pam Reeves	County Treasurer	Yes
Candace White	Real Property Lister	Yes

2. CURRENT & FUTURE PROJECTS

The resources of the Waukesha County Department of Parks and Land Use - Land Information Division are currently focused on data maintenance, update, and distribution. At this time, there are no plans to create new datasets, as all foundational elements have been completed. In some instances, defined projects will be required to complete major revisions to the underlying structure of existing datasets. At present, only one such major project is anticipated which includes the conversion of the Public Land Survey system control network and associated data layers to new horizontal and vertical datums

Project 1: Convert all data to modern horizontal and vertical datums

Project Description/Goal

This project will update and reestablish the basis of horizontal control for the Public Land Survey System (PLSS) to the North American Datum of 1983-2011 and the vertical control to the North American Vertical Datum of 1988-2012. Once the new control network is established, all existing data will be converted.

Business Drivers

This project is required to better accommodate integration of Waukesha County data with other data generated by State and Federal agencies who have already adopted the new datums. In addition, this project is required to meet Benchmark 4 as defined in the [Version 1 Statewide Parcel Map Database Project](#).

Objectives/Measure of Success

This project will be successful when the new control system is established.

Project Timeframes

It is anticipated that this project will take a total of 3 years to complete. Milestones will be developed and monitored that will relate to a Survey Township based project plan.

Responsible Parties

Project oversight will be provided by the Land Information Officer. The staff at the Southeastern Wisconsin Regional Planning Commission, acting as County surveyor, will be responsible for completing the project.

Estimated Budget Information

It is estimated that the cost to convert to the NAD83-2011 horizontal datum will be \$87,852. Conversion to the Vertical NAVD88-2012 data will cost an additional \$65,398.

It should be noted that the coordinates to be established during the conversion to the NAD83-2011 horizontal datum project will be a new mixture of survey observed and computed points, with a resulting accuracy equivalent to the system currently in use at Waukesha County. The output from the conversion to NAVD88-2012 horizontal datum will be a map showing the various conversion values to be applied throughout Waukesha County.

3. FOUNDATIONAL ELEMENTS

As stated earlier, the WLIP identified a set of Foundational Elements that were to serve as the basis for a complete County Land Information System. The following sections identify each defined foundational element and indicates the status within the Waukesha County Land Information System. It is important to note that Waukesha County has currently completed each foundational element as originally defined by the WLIP. The primary custodian of the WLIP defined Foundational Elements in Waukesha County is the LIS Division.

PLSS

Public Land Survey System Monuments

Layer Status

- Waukesha County has monumented every PLSS section corner, one-quarter section corner, center of section, and all witness monuments in the County – a total of over 2,500 PLSS monuments.
- Each monument has a companion digital Dossier Sheet that describes the history of the monument and displays a mapped location with survey ties. These Dossier Sheets are available via the County Webmapping system and from the Southeastern Wisconsin Regional Planning Commission (SEWRPC) website.
- Each monument Dossier Sheet contains a surveyed North and East coordinate that was generated to a horizontal survey control accuracy of Third Order, Class I, referencing the North American Datum of 1927, Wisconsin State Plane coordinate System, South Zone.
- Each monument Dossier Sheet contains a surveyed Elevation that was generated to a vertical survey control accuracy of Second Order, Class II, referencing the National Geodetic Vertical Datum of 1929.

Custodian

LIS Division.

Maintenance

Waukesha County contracts with the SEWRPC to provide yearly maintenance to the geodetic survey control system. This includes identifying monuments that may be disturbed during upcoming construction and insuring that all survey ties are correct and current. In addition, SEWRPC responds to notification from other surveyors regarding missing or damaged monuments which are then researched and replaced.

Standards

The Waukesha County geodetic control network was created using survey best practices and standards identified in the "Layer Status" section above.

Future Activities

- Update the horizontal control of the Waukesha County Geodetic Survey Control System to be based on a version of the North American Datum of 1983-2011.
- Update the vertical control of the Waukesha County Geodetic Survey Control System to be based on a version of the North American Vertical Datum of 1988-2012.
- See "Future Projects" Section for description

RECORD OF U. S. PUBLIC LAND SURVEY CONTROL STATION

VERTICAL: SECOND ORDER, CLASS II

LOCATION SKETCH

1.5M STONE AND FDN. HSE. NO. W156 N8005

SET SH. RR. SPK. NW FACE PP NO. 86-00625 0.9' ABG

SET CHOLD. CROSS IN TOP OF CONC. CURB

RBM: FRID. RR. SPK. E. FACE, 1.0' ABG PP NO. 89-08026 ELEV.: 838.268

REF. MK. AND RBM: SET CHOLD. CROSS IN TOP OF HYD. NOZZLE 1.7' ABG, ELEV.: 839.281

PP NO. 89-08216

PP NO. 89-08216

121.28

72.84

50.00

128.13

139.18

40.00

36.89

BOARD FENCE

LAWN

PILGRIM ROAD CTH YY

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Parcel Mapping

Parcel Geometries

Layer Status

- 100% of all parcels in Waukesha County have been converted to digital format and are available in an ESRI GeoDatabase format.
- Parcels were created based on the County adopted horizontal geodetic control system which is defined as having survey control accuracy of Third Order, Class I, referencing the North American Datum of 1927, Wisconsin State Plane coordinate System, South Zone.
- Each Tax parcel contains a tax key number attribute that can be linked to the County Tax listing system

Custodian

The LIS Division has assumed the custodianship of the digital parcels for most areas of the County, the exceptions being the Cities of Muskego, New Berlin, and Waukesha. These Cities maintain their own tax listing system and complete digital parcel map updates. These updated parcel maps are provided to the County for inclusion into the County digital parcel base map layers. The following table indicates the current estimated number of parcels maintained by each governmental unit:

Area	Total Number of Parcels	% of Total County
City of Muskego	9,500	6%
City of New Berlin	15,400	10%
City of Waukesha	22,100	14%
Waukesha County	106,700	69%
Total County	153,700	100%

Maintenance

The Digital parcel map files are updated throughout the year as changes occur in the tax file. The changes that are made by Waukesha County Staff are posted to the County's Webmapping site monthly. The changes from the three municipalities are posted to the County Webmapping site whenever they are provided. All parcels that have been retired since 2004, that is those that have been altered in area and have a tax key number no longer in use in the tax system, are maintained in a separate data layer.

Standards and Documentation

FGDC compliant Metadata has been created for the digital parcel data that identifies all codes used in the file.

Future

- Host the County digital parcel data in the "Cloud" to improve access.
- Move parcel data files into the ESRI parcel fabric format to improve editing functionality and achieve greater system standardization
- While all parcels for the County are digital, the data will need to be reformatted to meet the benchmarks set forth in the Version 1 Parcel Map project. It is anticipated that the parcel data will be reformatted to the Export format by March 31, 2016 and to Searchable format by March 31, 2017. This schedule will meet the requirements of Benchmarks 1, 2, and 3 as set forth in that project report.

Assessment/Tax Roll Data

Layer Status

The Tax Listing Division of the Waukesha County Department of Administration currently provides tax listing and Tax Billing services for 32 of the 35 municipalities in the County. The

County currently uses the EZAccess Tax system to provide these services. Tax listing tasks are completed year round with the files provided to the local municipalities in accordance with State Statutory requirements.

Custodian

The Tax Listing Division is custodian for the data in municipalities for which they provide tax listing services.

Maintenance

The Tax Listing Division provides data maintenance for data in municipalities for which they provide tax listing services.

Standards

Waukesha County conforms to all State Statutory and Wisconsin Department of Revenue requirements

The following table sets forth the status of all parcel attributes that are to be associated with tax parcels per Wisconsin Act 20:

"Act 20" Attributes Required By s. 59.72(2)(a)	Currently in County Data Inventory	Source of Data
Assessed value of land	Yes	Local Assessor
Assessed value of improvements	Yes	Local Assessor
Total assessed value	Yes	Local Assessor
Class of property, as specified in s. 70.32 (2)(a)	Yes	Local Assessor
Estimated fair market value	Yes	Computed
Total property tax	Yes	Computed
Any zoning information maintained by the county	No	Have data in areas maintained by County, but in separate layer and not tied to parcels
Any property address information maintained by the county	Yes	Local Municipalities
Any acreage information maintained by the county	Yes	Local Assessor, Recorded Plats, and GIS

Future

- Improve workflow to insure that tax listing data and GIS parcel layers are tightly synced
- Improve method for importing and incorporating data from Municipalities that perform their own tax listing function into the County data files.
- Improve timeliness of tax listing and mapping functions.

ROD Real Estate Document Indexing and Imaging

Status

- Grantor/Grantee and Tract Index is available as a computerized search back to 1994. Search of index books required for documents prior to 1994.
- Tract Index search is based on PLSS one-quarter section search for unplatted parcels. Tract Index search is available by Simultaneous Conveyance division for platted areas.
- All documents identified in State Statute are indexed in Grantor/Grantee and Tract Index systems
- All documents since 1994 are imaged and accessible for viewing through the computerized indexing system.

- All Plats of Survey on file with the Register of Deeds office have been imaged and indexed in the Tract Index.
- All map documents, including Subdivisions Plats, Condominium Plats, and Certified Survey Maps have been imaged and indexed in the Tract Index.

Custodian

- County Register of Deeds
- County Register of Deeds is also designated as Deputy County Surveyor to enable acceptance of Plats of Survey.

Maintenance

County Register of Deeds

Standards

All State standard and requirements are maintained

Future

The Register of Deeds is currently completing a project that will image all documents from 1993 back to 1953. These documents will be indexed in both the Grantor/Grantee and Tract Index systems and made accessible for viewing from those systems.

LiDAR and Other Elevation Data

LiDAR

Layer Status

- In 2015, a LiDAR data set was acquired for Waukesha County
- The Data set will contain one set of unclassified LiDAR files in ".las" format and one set of bare-earth classified LiDAR files in ".las" format.
- Files will be prepared to meet U.S. Geological Survey Quality Level 2 (QL2) specifications.
- Data sets will be collected at 0.7 meter nominal pulse spacing and greater than or equal to 2.0 points per square meter.
- Data will be provided referenced to the NAD83-2011 horizontal datum and the NAVD88-2012 vertical datum.

Custodian

LIS Division.

Maintenance

LIS Division, however, no maintenance activities are anticipated

Standards

As stated: U.S. Geological Survey Quality Level 2 (QL2)

Derivatives

- A Digital Terrain Model (DTM) files will be created with mass point and breakline features depicting the three-dimensional terrain.
- Contour Line files will be created at one-foot intervals.
- A FEMA Vertical Accuracy Report and one FOCUS LiDAR report validating the accuracy of the LiDAR and elevation data sets.

Future

LiDAR data will be acquired on a 5 year cycle, corresponding to acquisition of Orthophotography. This process will provide the ability to detect changes in elevation using automated methods.

Orthoimagery

Orthoimagery

Layer Status

- Current 2010; 6" pixel resolution; color; Orthrectified, compiled at 1"=100' scale
- Collected as part of project administered by the SEWRPC.

Custodian

LIS Division

Maintenance

LIS Division, however, no maintenance activities are anticipated

Standards

Compiled to meet National Map Accuracy Standards

Future

- 2015; 6" pixel resolution; color; Orthrectified, compiled at 1"=100' scale currently being collected
- 2015 will be delivered as 2 separate data sets: one referenced to horizontal datum NAD 1927 and the other referenced to horizontal datum NAD 1983-2011
- Next planned Orthoimagery collection scheduled for 2020

Historic Orthoimagery

Layer Status

- 2007; 12" pixel resolution; color; Orthrectified, compiled at 1"=200' scale
- 2005; 6" pixel resolution; color; Orthrectified, compiled at 1"=100' scale
- 2000; 12" pixel resolution; black and white; Orthrectified, Part of the county compiled at 1"=200' with 1' pixel resolution and Part of the County compiled at 1"=400' scale with 2' pixel resolution
- 1995; 2' pixel resolution; black and white; Orthrectified, compiled at 1"=400' scale
- 1990; 1' pixel resolution; black and white; Not Orthrectified, compiled at 1"=400' scale
- 1980; 1' pixel resolution; black and white; Not Orthrectified, compiled at 1"=400' scale
- 1970; 1' pixel resolution; black and white; Not Orthrectified, compiled at 1"=400' scale
- 1963; 1' pixel resolution; black and white; Not Orthrectified, compiled at 1"=400' scale
- 1950; 1' pixel resolution; black and white; Not Orthrectified, compiled at 1"=400' scale
- 1941; 1' pixel resolution; black and white; Not Orthrectified, compiled at 1"=400' scale

Custodian

LIS Division

Maintenance

LIS Division, however, no maintenance activities are anticipated

Address Points and Street Centerlines

Address Point Data

Layer Status

- Address Points are maintained for each address in the County
- Address Points are linked to a related tax parcel and a related street centerline segment
- Address Points are tied to a normalized street name table
- Address Points are provided to the Waukesha County Emergency Preparedness Department for use in the shared dispatch system.
- Address Points are provided to the Wisconsin Government Accountability Board for use in the Statewide Voter Registration System (SVRS).
- All new Address Points are shared with Tax Listing Division

Custodian

LIS Division

Maintenance

Maintenance is a continuous process completed by the LIS Division. A web based system has been developed that allows staff of local municipalities, which have statutory authority for assignment of addresses, to directly request addresses be added or edited in the County system.

Standards

- Addresses are maintained according to USPS standards
- Addresses are formatted to comply with the ESRI Local Government Address Data Model

Future

Continue maintenance activities.

Street Centerlines/Address Ranges**Layer Status**

- All street Centerlines maintained
- Contain attribute for jurisdiction
- Link to normalized street name table
- Assigned local name and linked to street name alias table for alternate names and other designations
- Contain attributes for address range formatted as Left/Right, Low/High

Custodian

LIS Division. It should be noted that the County Department of Public Works also maintains a database of the street centerlines that comprise the County Trunk Highway system. That database has not been integrated with the LIS Division maintained database, as the attributes and segmentation required for the 2 files are different.

Maintenance

Completed by LIS Division staff concurrent with updating the address points data file.

Future

Continue maintenance activities.

Trails**Layer Status**

Trails attributed with jurisdiction

Custodian

Parks Division of Parks and Land Use Department

Maintenance

Parks Division of Parks and Land Use Department

Future

Continue maintenance activities.

Land Use**Current Land Use****Layer Status**

2010 Existing Land Use

Custodian

SEWRPC

Maintenance

SEWRPC, although this is a point in time inventory with limited maintenance

Future

Next inventory to be determined by SEWRPC.

Future Land Use**Layer Status**

Waukesha County Development Plan - 2035

Custodian

Planning Division of the Parks and Land Use Department

Maintenance

Planning Division of the Parks and Land Use Department perform an annual review and complete an official amendment process.

Standards

Completed according to requirements for Comprehensive Planning set forth in State Statutes.

Zoning

County General Zoning**Layer Status**

The County currently maintains and administers Zoning for the Towns of Oconomowoc, Ottawa, and Vernon.

Custodian

Parks and Land Use Department – Planning and Zoning Division

Maintenance

Completed on a monthly basis by Planning and Zoning Division staff. Rezoned information is updated upon occurrence.

Standards

No formal standards

County Special Purpose Zoning**Layer Status**

- The County maintains Shoreland Zoning/Jurisdiction layers for all unincorporated areas, in addition to floodplain study boundaries above and beyond FEMA's mapped boundaries.
- The Airport Height Ordinance data for area around the Waukesha County Airport
- Farmland preservation areas are integrated into the County Zoning ordinances/maps and are not separate data layers at this time.

Custodian

Parks and Land Use Department – Planning and Zoning Division

Maintenance

Monthly or more, as re-zones occur or floodplain information becomes available. The exception is the Airport Height Ordinance, which reflects the map as it was approved in 1994.

Standards

No formal standards

Municipal Zoning Information Maintained by the County

Layer Status

- Six towns – Brookfield, Eagle, Lisbon, Merton, Waukesha, and Mukwonago - contract with the County to perform zoning map creation and maintenance to support each Town Zoning Ordinance.
- There is one small area of extra-territorial zoning mapped between the Town of Lisbon and the Village of Menomonee Falls.

Custodian

Parks and Land Use Department – Planning and Zoning Division

Maintenance

Monthly or more, as re-zones occur or floodplain information becomes available

Standards

No formal standards

Administrative Boundaries

Civil Division/County Boundaries

Layer Status

- Layer of all municipal boundaries
- Layer of County Boundary as defined by monumented PLSS sections
- Boundaries provided to Wisconsin Government Accountability Board for use in the State Voters Registration System (SVRS)
- Boundaries provided to Wisconsin Legislative Technology Services Bureau for provision to U.S. Bureau of the Census
- Separate layer of annexations

Custodian

LIS Division

Maintenance

LIS Division

Standards

Maintained in format compatible with Wisconsin Government Accountability Board.

School District

Layer Status

- Current School District Boundary
- Parcels contain a school district code. Parcels were merged into areas based on the school district code to create the school district boundary.

Custodian

LIS Division and Tax Listing

Maintenance

Tax Listing maintains school district codes in tax system, especially checking if new developments split an existing boundary. LIS maintains map layer, incorporating changes from Tax Listing

Future

Continued maintenance

Election Boundaries

Layer Status

Municipal Election Wards

Custodian

LIS Division

Maintenance

LIS Division maintains the election ward data by monitoring annexations received at the County. Some annexations are filed with the County Clerk, some with the Register of Deeds, and some with both offices. The LIS Division works with both Departments to get complete information. Annexation petitions usually contain election ward information, but if it is not present, local staff are contacted.

Standards

Maintained in format that can be transmitted to the Wisconsin Government Accountability Board

Future

Develop a more efficient method of monitoring annexations related to their effect on the parcel, municipal boundary, and election ward map layers. New State Legislation includes provisions to formalize annexation filing requirements.

Public Safety**Layer Status**

- Public Safety Answering Point (PSAP) areas
- Fire Agency response districts
- EMS Agency response districts
- Police Agency response districts
- Potential Emergency Shelters

Custodian

LIS Division

Maintenance

Layers are maintained by the LIS Division from information provided by the County Emergency Preparedness Department and local emergency response agencies.

Other Layers**Planning Permits****Layer Status**

- Area identified in Planning issued permits: Variances, Conditional Uses, Rezones, Zoning Violations, Plan of Operation
- Linked to imaged documentation

Custodian

Waukesha County Planning Division

Maintenance

Waukesha County Planning Division

Bridges and Culverts**Layer Status**

- County Bridges
- Linked to picture of bridge
- Linked to As-Built drawing

Custodian

LIS Division

Maintenance

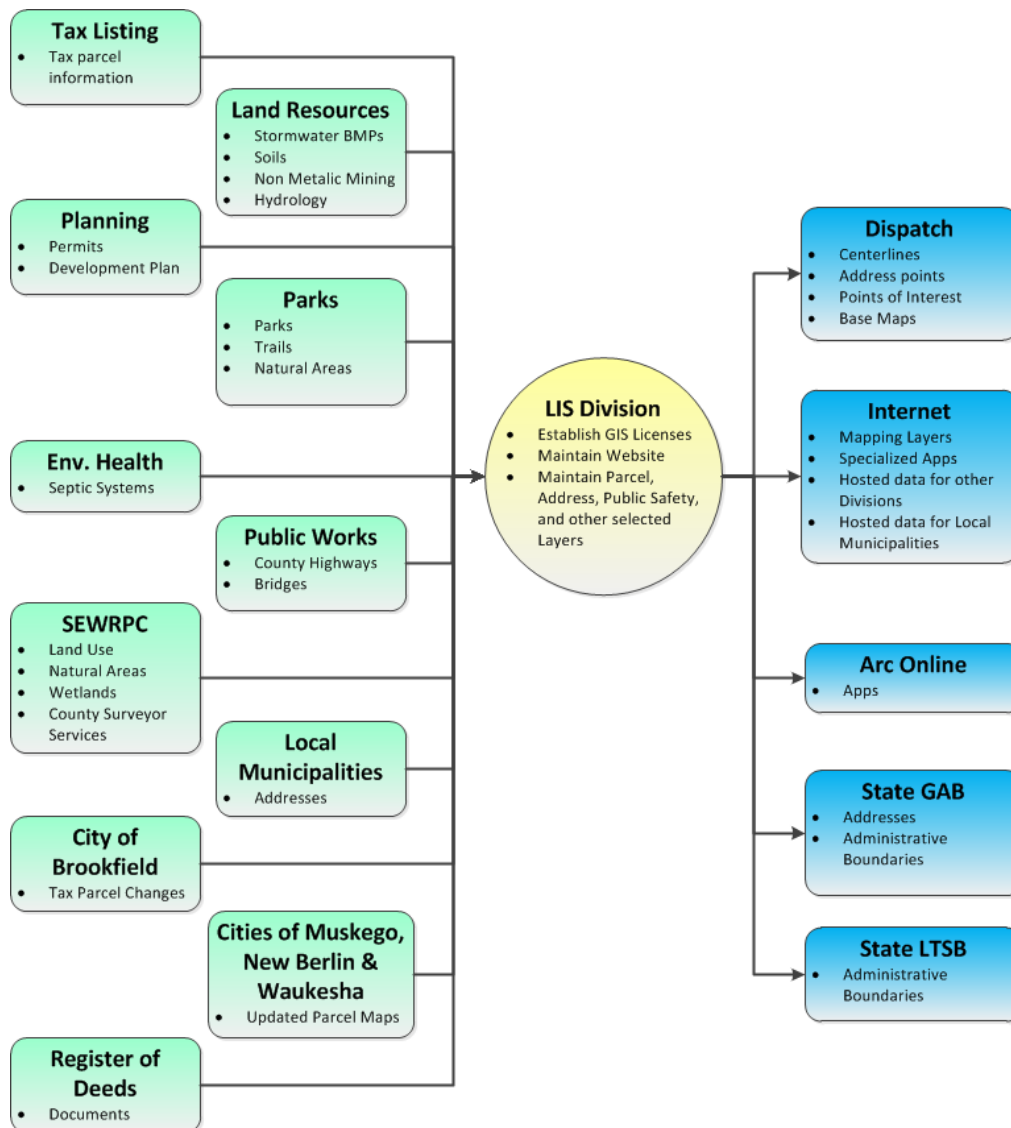
LIS Division with data provided by Department of Public Works

4. LAND INFORMATION SYSTEM

Waukesha County Land Information System Components and Relationships

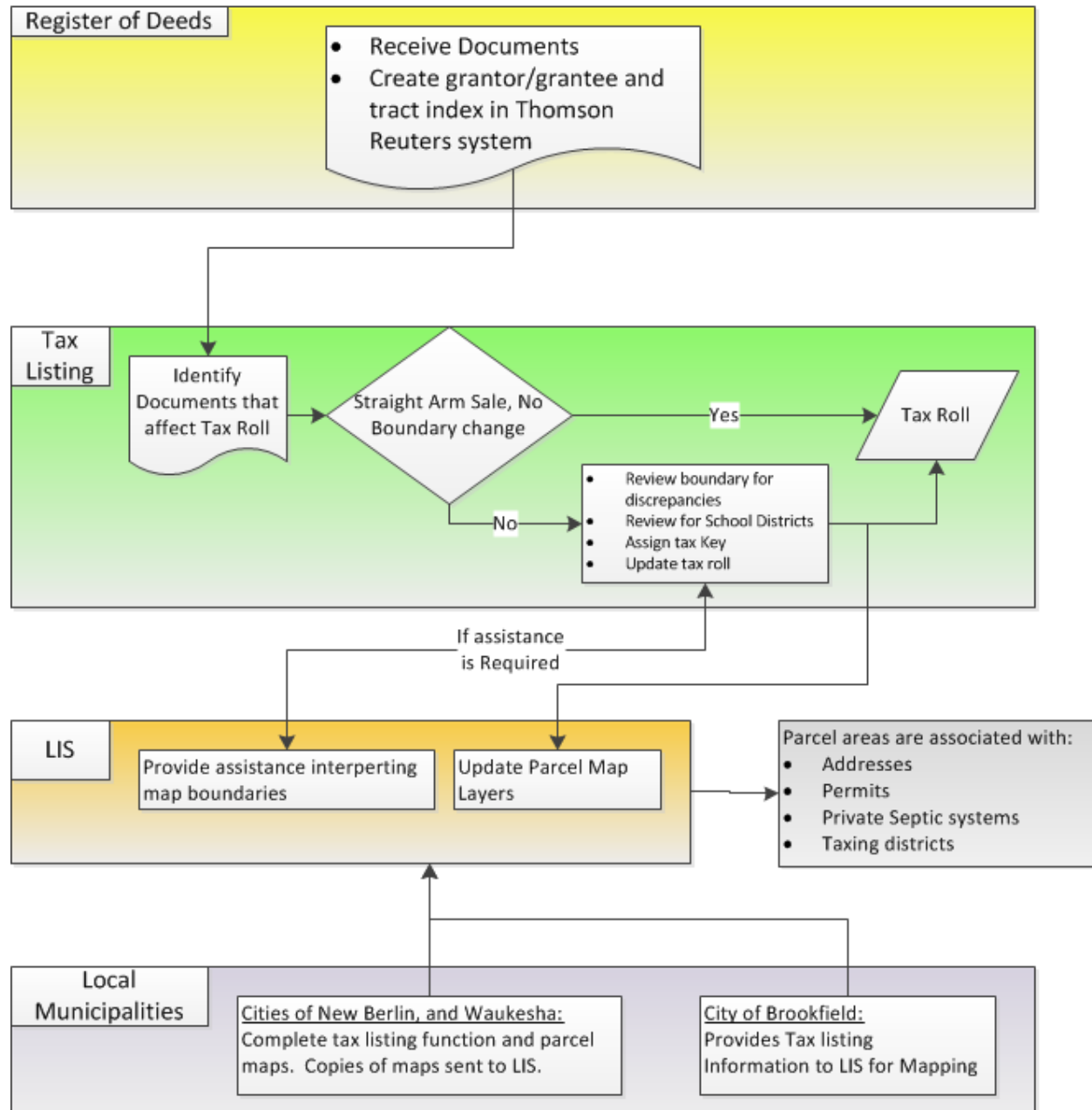
The WLIP seeks to enable land information systems that are both modernized and integrated. Integration entails the coordination of land records to ensure that land information can be shared, distributed, and used within and between government at all levels, the private sector, and citizens. The following flow chart identifies various County Departments that contribute to the Land Information System.

WAUKESHA COUNTY LAND INFORMATION SYSTEM COMPONENTS AND RELATIONSHIPS



Parcel Mapping Process

Parcel mapping is central to the creating and maintenance of a Land Information System, a point emphasized in ongoing legislation related to the Wisconsin Land Information Program. The following table describes the current parcel mapping process in Waukesha County.



Waukesha County Land Information System Technical Specifications

Hardware

In 2015, Waukesha County moved all software and data related to the Land Information System to computer servers hosted by Amazon Web Services.

Software

Waukesha County licenses the following software products:

Company	Product	Purpose
ESRI	ArcGIS Server	Hosting Web services and supporting data
ESRI	ArcGIS for Desktop	Data editing and analysis
ESRI	3d Analyst, Spatial Analyst, Data Interoperability, Image Server	Special purpose analytics
ESRI	ArcOnline account	Online data application site
ESRI	ArcCatalog	FGDC compliant metadata on all foundational element datasets
Latitude Geographics	Geocortex Essentials	Webmap system creation and maintenance
QCoherent	LP360	LiDAR data analysis
Safe Software	FME	Data format conversion
ETGeoTools	--	Geoprocessing tools
Thomson Reuters	Aumentum Reporter	Register of Deeds Document Imaging and Indexing system
Hammer Enterprises	EZ Tax	Tax Listing and Billing

Municipal Data Integration Process

Waukesha County has a long history of municipal data integration. At present, we will provide any data set to a municipality that they request. In cases where the County needs to acquire data from a municipality, such as parcel maps, the municipalities and County have worked cooperatively to develop compatible data formats.

Public Access and Website Information

Public access to land information is provided via 1 general public facing website. The url for the site is:
<http://www.waukeshacounty.gov/lis/>

Access to parcel, tax, address, school district, supervisory districts, floodplain, zoning (where administered by the County), land use, public lands, soils, PLSS, elevation, hydrography, and historic aerial photography is provided via this single site. Waukesha County will be moving to provide additional public access to data through the development of specialized webmapping applications that will be hosted in the Arc OnLine platform. Lastly, Waukesha County will be developing webmapping site to host municipal datasets as requested

Data Sharing

The current data privacy policy as approved by the Waukesha County Board of Supervisors on November 12, 2002 is:

In accordance to the State of Wisconsin's laws, including the open records laws under Chapter 19 of the statutes. Waukesha County government provides access to public records. It is the intent of Waukesha County government to provide access to certain public records in an electronic format via the Internet as a service to the community, while protecting the privacy

interests of citizens in the community, if possible. No information will be provided via the Internet that is not otherwise made available to the public at or by Waukesha County government offices.

In the instance of land information, names of property owners shall be available via the Internet when attached to individual, identifiable land parcels. At this time, the ability to search for properties by owner name will not be provided, as the limited need for this service does not counter related privacy concerns.

Beyond this, all datasets are available with no restrictions, and at no cost to other Government and Educational institutions.

It is currently planned to move to an "Open Data Model" where spatial datasets are provided at no cost to all users together with basic analytical tools at sometime within the 3 year planning horizon of this plan.

Training and Education

Due to the constant changing nature of GIS technology, training and education is viewed as vital to Waukesha County Land Information System development and maintenance. Staff are encouraged and supported to attend State and National conferences, workshops, and technical training courses. When needed, experts will be contracted to either come on site to present specialized training or provide online support.